

D<sup>5</sup>  
prepared by a method comprising subjecting colostrum to ultra-filtration to obtain an ultra-filtered colostrum retentate, and recovering the retentate, wherein said fraction <sup>as said fraction retentate</sup> includes colostrum-derived growth factors and casein maintained within the retentate following ultra-filtration of the colostrum.

D<sup>6</sup>  
Claim 4 (amended) A food composition according to Claim 1, wherein the method by which the colostrum fraction is prepared comprises:

subjecting the ultra-filtered colostrum retentate to a spray drying process.

#### REMARKS

The Official Action of May 21, 2003 has been carefully considered and reconsideration of the application as amended is respectfully requested.

Claim 1 has been amended more clearly to distinguish over the cited art. In particular, the claim has been amended to recite that the claimed food composition comprises a colostrum ultra-filtrate retentate wherein the casein partitions with the colostral growth factors. Support for these recitations appears in the specification as filed at, for example, page 8, lines 10-20, and page 20, lines 31-32.

Composition claims 1 and 3 stand rejected under 35 USC 102(b) as allegedly being anticipated by Aalto et al. Composition claim 4 stands rejected under 35 USC 103(a) as allegedly being unpatentable over Aalto et al in view of Tokoro. Applicant

respectfully traverses these rejections.

As discussed above, claim 1 is now limited to a colostrum fraction derived from an ultrafiltration retentate. Casein fractionates with the growth factors and is present in the retentate. By contrast, the Aalto et al reference describes the use of a **filtrate** which is recovered from a membrane with a cut off of 100,000 dalton. In Aalto et al, it is always the filtrate that is recovered and used for the colostrum fraction. A retentate is not recovered and used.

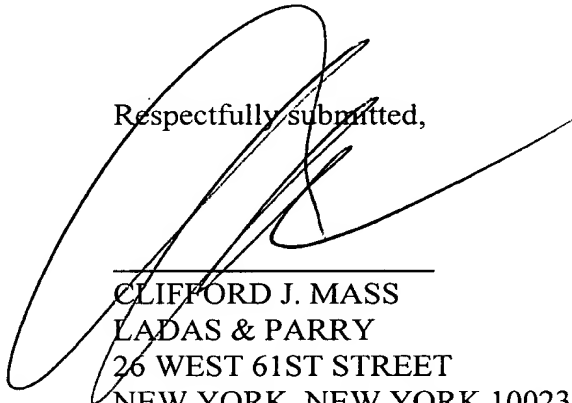
It may readily be appreciated that the retentate prepared by the recited method is **not** the same composition as a filtrate derived from a cut off of 100,000 daltons. The retentate will obviously contain a different combination of molecules than the filtrate. For example, it is not unusual to find molecules or clumps of proteins having a molecular weight of greater than 100,000 daltons in colostrum. These would be retained in the retentate prepared by the recited method, but would not be in the filtrate described in Aalto et al. In other words, the claimed retentate has a substantially different composition than a filtrate prepared using a membrane with a 100,000 dalton cut off, which filtrate would be devoid of complex molecules which would be commonly found in colostrum and in the claimed retentate. Since the cited references do not show or suggest the claimed retentate, they cannot set forth even a *prima facie* case of obviousness than the invention as claimed.

With respect to method claims 11-27, the Examiner has rejected the same

under 35 USC 103(a) as allegedly being unpatentable over the references cited at paragraphs 5-7 of the Official Action. However, these claims all depend from claim 1 and none of the cited references shows or suggests the claimed food composition (retentate) for use in any of the claimed methods. Accordingly, none of these references can be considered to set forth even a *prima facie* case of obviousness for the invention defined in these claims either.

In view of the above, all objections and rejections of record are believed to have been successfully traversed and the application is believed to be in allowable form. An early notice of allowance is earnestly solicited and is believed to be fully warranted.

Respectfully submitted,



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Page 1, paragraph 4, amend as follows:

One of the many growth factors found in colostrum is [[IGF-1]] insulin-like growth factor (1) (hereinafter "IGF-1"). In the bovine colostrum, the concentration is more than 20 times greater than in normal milk (Marcotty, C.F. et al (1991); Oda, S.H. et al (1989)). Bovine and human IGF-1 are very similar in composition.

Claim 1 (amended) A food composition for changing body composition and/or physical work capacity, said food composition comprising a colostrum [[or a]] fraction prepared by a method comprising subjecting colostrum to ultra-filtration to obtain an ultra-filtered colostrum retentate, and recovering the retentate, [[thereof]] wherein said fraction includes colostrum-derived growth factors and casein maintained within the [[colostrum]] retentate following [[fractionation]] ultra-filtration of the colostrum.

Claim 4 (amended) A food composition according to [[claims 1 or 3]] Claim 1, wherein the [[colostrum is prepared by a]] method by which the colostrum fraction is prepared comprises: [[comprising

subjecting colostrum to an ultra-filtration process to provide an ultra-filtered colostrum retentate;]]

subjecting the ultra-filtered colostrum retentate to a spray drying process [[; and removing the spray-dried colostrum]].